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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/877,728	06/18/1997	HIROTO OKAWARA	35.C12127	6347

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EXAMINER

NGUYEN, LUONG TRUNG

ART UNIT	PAPER NUMBER
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2612

DATE MAILED: 10/02/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.
08/877,728

Applicant(s)
Okawara

Examiner
Luong Nguyen

Art Unit
2612



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jul 1, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9, 10, 13-37, 40-45, and 47-50 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9, 10, 13-37, 40-45, and 47-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other:

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DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-7, 9-10, 13, 42-43, 44-45, 47, 49 filed on 7/1/2002 have been fully considered but they are not persuasive.

Applicant's arguments with respect to claims 14-37, 40-41, 48 and 50 filed on 7/1/2002 have been considered but are moot in view of the new ground(s) of rejection.

The Applicant's traversal of the objection to the drawings is not deemed to be persuasive. The specification clearly identifies the material shown therein to be "conventional" (see page 1, lines 9-12, page 3, lines 21- 22, page 6, lines 23-24). The drawings are objected to Figures 1-5, 12-13, 14A-14B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

In re page 17, Applicant argues that nowhere does the Shimizu'200 patent disclose or suggest such a feature with respect to a camera unit which includes the setting means function together with the menu function control unit and display means, as disclosed in the present invention.

In response, regarding claim 1, the Applicant amended claim 1 with the claim limitation "display means provided in said image pickup apparatus and displaying an image picked up by

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said image pickup apparatus; and setting means for selecting s desired setting item among a plurality of items displayed on the predetermined menu and setting a condition regarding the motion direction of the lens unit.” The Examiner considers that the claim as amended still do not distinguish over Kawanami patent in view of Shimizu patent. Kawanami discloses display device 21 is provided within camera body 3 (figure 2, column 10-17). And Shimizu discloses a menu displayed on a display screen as a setting means to permit a user of a camera to operate thereupon to select various camera operating conditions from among a plurality of items displayed on a predetermined menu, such as the speed at which the focal length of the camera lens is moved when a zooming operation is performed (column 5, lines 36-46). Using a displayed menu for selecting a camera’s operating settings makes the camera easier to operate by reducing the number of operation switches (column 1, lines 18-28; column 1, line 65 through column 2, line 3). Shimizu also discloses display 62 for displaying an image picked up by image sensor 2 (figure 1, column 31-38).

In re pages 18-19, Applicant argues that neither the Takahashi ‘370 patent nor the Haraguchi ‘456 patent, alone or in combination, discloses or suggests the feature of inhibition means for inhibiting the magnification lens to stop during a predetermined time when the detection means detects that rotation of the ring member is stopped.

In response, regarding claim 42, the Applicant amended claim 42 with the claim limitation “inhibition means for inhibiting the magnification lens to stop during a predetermined period when

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said detection means detects a stop of rotation of the ring member.” The Examiner considers that the claim as amended still do not distinguish over Takahashi patent in view of Haraguchi et al. patent. Haraguchi et al. disclose by having zoom motor 5 continue to rotate in the reverse direction for t msec after detection of POS=9, and by thereafter rotating motor 5 in the forward direction, motor 5 can be stopped precisely at POS=A under the condition that backlash on the forward rotation side is removed (column 23, line 63 through column 24, line 2).

In re page 19, Applicant argues that Takahashi ‘370 patent fails to disclose or suggest the feature of change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of the detection means, so as to change a detection amount of the ring member to be used for motion/stop control.

In response, regarding claim 44, the Applicant amended claim 44 with the claim limitation “change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of the detection means, so as to change a detection amount of the ring member to be used for motion/stop control of the magnification lens group performed by said control means.” The Examiner considers that these claims as amended still do not distinguish over Takahashi patent. Takahashi discloses that the rotation speed of the PZ motor 34 will be changed so as to properly adjust the zooming speed (column 10, lines 1-11).

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In re pages 19-20, Applicant argues that the Sato '836 patent fails to disclose or suggest the feature of change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of the detection means in accordance with a state of recording operation.

In response, regarding claim 48, the Applicant amended the claim with the claim limitation "change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of said detection means in accordance with a state of a recording operation." The Examiner considers that this feature is disclosed by Sato et al. in column 5, lines 10-19, column 7, lines 19-26, column 8, lines 31-46).

Drawings

2. Figures 1-5, 12, 13, 14A, 14B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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4. Claims 44-45 and 47 are rejected under 35 U.S.C. 102(b) as being anticipated by Takahashi (US 5,159,370).

Regarding claim 44, Takahashi discloses an image pickup apparatus comprising a ring member (51) disposed concentrically about a lens optical axis of a lens unit, a detection means for detecting a change amount of rotation of the ring member (column 9, lines 1-14), a control means for determining motion direction and speed of a magnification lens group in accordance with an output of the detection means and performing motion/stop control of the magnification lens group along the optical axis (column 9, lines 15-49), and a change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of said detection means (column 9, lines 21-29) so as to change a detection amount of the ring member to be used for motion/stop control of the magnification lens group performed by said control means (column 10, lines 1-11).

Regarding claim 45, Takahashi discloses that the lens group is removably and exchangeably mounted on a main body of the image pickup apparatus (column 2, line 46).

Regarding claim 47, Takahashi discloses that the change means changes the motion speed of the magnification lens group relative to an output of the detection means (column 9, lines 21-29).

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Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-7 and 9-10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawanami (US 5,278,601) in view of Shimizu (US 5,485,200).

Regarding claim 1, Kawanami disclose an image pickup apparatus having a camera body (3, figure 3) and a lens unit (15, figure 3), comprising a ring member (51, figure 5) for driving a lens (52); a detection means (55, 56) for detecting a change amount of rotation of the ring member; a control means (59) providing in the lens unit for performing motion/stop control of the lens group along an optical axis in accordance with a detection result by the detection means; and motion direction setting means (63) providing in camera body for a user to set a desired motion direction of the lens group relative to the rotation direction ring member, wherein the motion direction setting means comprises character generator, menu setting means, display means (21), a menu function control unit for controlling the character generator in accordance with the operation state of the menu setting means, and for displaying a predetermined menu on a display screen of the display means (column 3, lines 15-17).

Kawanami does not disclose that the menu setting means is operated by and does not disclose a setting means for selecting a desired setting item among a plurality of items displayed

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on the predetermined menu and setting a condition regarding the motion direction of the lens unit; and displaying an image picked up by said image pickup means. However, Shimizu discloses display 62 for displaying an image picked up by image sensor 2 (figure 1, column 31-38). And Shimizu discloses a menu displayed on a display screen as a setting means to permit a user of a camera to operate thereupon to select various camera operating conditions from among a plurality of items displayed on a predetermined menu, such as the speed at which the focal length of the camera lens is moved when a zooming operation is performed (column 5, lines 36-46). Using a displayed menu for selecting a camera's operating settings makes the camera easier to operate by reducing the number of operation switches (column 1, lines 18-28; column 1, line 65 through column 2, line 3). In view of the teaching in Shimizu, it would have been obvious to one of ordinary skill in the art at the time the invention was made to configure the menu of Kawanami so as to serve as a setting means operated upon by a user for selecting a desired setting time among a plurality of items displayed on the predetermined menu and setting a condition regarding the motion direction of the lens unit in order to reduce the number of operating switches and make the camera easier to use.

Regarding claim 2, Kawanami and Shimizu disclose that the lens group includes a magnification lens (Kawanami; 52) and the motion direction setting means comprises an operation switch (Kawanami; 63) capable of being operated by a user, and a change means (Kawanami; 64, 59) for changing the motion direction of the lens group relative to the rotation direction of the

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ring member in accordance with the operation of the operation switch (Kawanami; column 5, lines 20-65).

Regarding claim 3, Kawanami and Shimizu discloses that a lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; column 5, lines 25).

Regarding claim 4, Kawanami and Shimizu discloses that ring member is disposed concentrically about an optical axis of the lens group (Kawanami; figure 5).

Regarding claim 5, Kawanami and Shimizu discloses that the lens group includes a magnification lens (Kawanami; 52) and the motion direction setting means comprises memory means (Kawanami; 64) for storing motion direction information of the lens group relative to the rotation of the ring member, the motion direction being given by a user (Kawanami; switch 63), and a change means (Kawanami; 64, 59) for changing the motion direction of lens group in accordance with the motion direction information stored in the memory means.

Regarding claim 6, Kawanami and Shimizu discloses that a lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; column 5, lines 25).

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Regarding claims 7 and 13, Kawanami and Shimizu discloses that ring member is disposed concentrically about an optical axis of the lens group (Kawanami; figure 5).

Regarding claim 9, Kawanami and Shimizu discloses that a lens unit is made removable relative to the main body of the image pickup apparatus (Kawanami; column 5, lines 25).

Regarding claim 10, Kawanami and Shimizu discloses that ring member is disposed concentrically about an optical axis of the lens group (Kawanami; figure 5).

7. Claims 14-37, 40-41, 48 and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 5,648,836) in view of Mabuchi et al. (US 5,161,026).

Regarding claim 14, Sato et al. disclose an image pickup apparatus having a camera part (see figure 1 and note that it is inherent that a camera part is present in Sato et al. since a picture can be taken by the device, and there is a CPU 5, a multipurpose operation part 21 and a selecting means 22 that enables the user to make selections of a driving mode as desired, column 5, lines 16-19, these items inherently residing within a camera part of some kind), and a lens part with a magnification lens and a ring member that drives the lens part (see figure 1), comprising a detection means (2) which detects a change amount of rotation of the ring member (1) for driving the lens part (column 4, lines 25-39), and a control means (5) for selecting and determining a response characteristic (column 5, lines 10-19) between an output of said detection means and a

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motion of the magnification lens, and for controlling motion/stop of at least the magnification lens along an optical axis in accordance with an output of said detection means; and storing means (CPU, 5), provided in said camera part, for storing information of the response characteristic transmitted from the lens part (the CPU 5 stores information of the response characteristic from the lens part because it generates a control signal to drive the lenses in response to the operation of the zoom ring, column 4, lines 26-41).

Sato et al. fail to specifically disclose transmitting means for performing communication between the camera part and the lens part. However, Mabuchi et al. disclose an interchangeable lens camera system which includes communication line 4 for communicating between lens assembly 1 and camera assembly 2 (figure 6, column 8, lines 18-36). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device in Sato et al. by the teaching of Mabuchi et al. in order to provide a camera system capable of efficiently controlling each function of a lens assembly by communication with a camera assembly (column 2, lines 23-25).

Regarding claim 15, Sato et al. disclose that the plurality of characteristics of the control means include a first characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to be constant (column 5, lines 37-43) and a second characteristic for controlling a motion speed of the magnification lens to be variable in accordance with a rotation speed of the ring member (column 5, line 62 through column 6, line 10).

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Regarding claim 16, Sato et al. disclose that the plurality of characteristics of the control means include a first characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a first predetermined amount and a second characteristic for controlling a motion amount of the magnification lens per unit rotation of the ring member to become a second predetermined amount different from the first predetermined amount (column 6, lines 49-63).

As to claim 17, see Examiner's comments regarding claim 14 and note that Sato et al. disclose that the plurality of characteristics are settable by a user (column 5, lines 10-19, column 7, lines 19-26, column 8, lines 31-46).

As to claim 18, see Examiner's comments regarding claim 15.

As to claim 19, Sato et al. disclose that the characteristic of the control means is changed in accordance with the state of an operation switch capable of being operated by a user (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 41-46).

As to claim 20, Sato et al. disclose that the characteristic of the control means is changed in accordance with information of the characteristic of the control means set by a user (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 41-46).

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As to claim 21, Sato et al. disclose that the characteristic of the control means is changed in accordance with a photographing state (column 8, lines 31-46).

As to claims 22 and 24, see Examiner's comments regarding claim 16.

As to claims 23 and 25, see Examiner's comments regarding claim 19.

As to claim 26, see Examiner's comments regarding claim 14 and note that Sato et al. disclose the ring member as disposed concentrically about a lens optical axis (figure 1), and also disclose an outputting means for outputting information of the response characteristic from said lens unit to storing means in said main body (inherent in the operation within CPU 5 since once the characteristic has been determined must be stored in order to provide the drive signal for the lens).

As to claim 27, see Examiner's comments regarding claim 15.

As to claim 28, see Examiner's comments regarding claim 16.

As to claim 29, see Examiner's comments regarding claim 26 and note that Sato et al. disclose a setting means for a user to set the characteristic of said control means (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 41-46).

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As to claim 30, see Examiner's comments regarding claim 15.

Regarding claim 31, Sato et al. disclose an operation switch capable of being operated upon by a user and change means for changing the characteristic of the control means in accordance with a state of the operation switch (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 41-46).

Regarding claim 32, Sato et al. disclose that change means changes the characteristic of the control means in accordance with information of the characteristic of the control means set by a user (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 41-46).

Regarding claim 33, Sato et al. disclose that change means changes the characteristic of the control means in accordance with a photographing state (column 8, lines 31-46).

As to claim 34, see Examiner's comments regarding claim 16.

As to claim 35, see Examiner's comments regarding claim 31.

As to claim 36, see Examiner's comments regarding claim 32.

As to claim 37, see Examiner's comments regarding claim 33.

Regarding claims 40 and 41, Sato et al. disclose that the ring member is disposed concentrically about the lens group (figure 1).

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Regarding claim 48, Sato et al. disclose an image pickup apparatus comprising a ring member (1) disposed concentrically about a lens optical axis (figure 1), detection means (2) for detecting a change amount of a rotation of the ring member, a control means for determining motion direction and speed of a magnification lens group in accordance with an output from the detection means and performing motion/stop control of the magnification lens group along the optical axis (column 4, lines 25-41), and a change means for changing a sensitivity of the motion of the magnification lens group relative to a detection result of the detection means in accordance with a state of recording operation (column 5, lines 10-19; column 7, lines 19-26; column 8, lines 31-46).

Regarding claim 50, Sato et al. disclose that the change means changes the motion speed of the magnification lens group relative to an output of the detection means (column 7, lines 19-26).

8. Claims 42-43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (US 5,159,370) in view of Haraguchi et al. (US 5,475,456).

Regarding claim 42, Takahashi discloses an image pickup apparatus comprising a ring member (51) disposed concentrically about a lens optical axis of a lens unit, a detection means for detecting a change amount of rotation of the ring member (column 9, lines 1-14), a control means for determining motion direction and speed of a magnification lens group in accordance with an

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output of the detection means and performing motion/stop control of the magnification lens group along the optical axis (column 9, lines 15-49).

Takahashi does not disclose an inhibition means for inhibiting the magnification lens to stop during a predetermined period when said detection means detects a stop of rotation of the ring member. However, Haraguchi et al. disclose inhibiting a magnification lens from stopping during a predetermined period after a stop command has been issued so that the lens can be stopped more precisely at a desired terminal position (column 23, line 63 through column 24, line 2). In view of the teaching in Haraguchi et al., it would have been obvious to one of ordinary skill in the art at the time of the invention to provide in Takahashi an inhibition means for inhibiting the magnification lens to stop during a predetermined period in the state that said detection means does not detect the amount of rotation in order to more precisely perform the stopping operation.

Regarding claim 43, Takahashi discloses that the lens unit is removably and exchangeably mounted on a main body of the image pickup apparatus (column 2, line 46).

9. Claim 49 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al. (US 5,648,836) in view of Kawanami (US 5,278,601).

Regarding claim 49, Sato et al. disclose all of the limitations except that of the lens unit being removably and exchangeably mounted. However, Kawanami teaches that such a design is well known in the art (column 1, lines 19-22). Enabling the lens unit of Sato et al. to be

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removably would clearly increase the utility of the device by permitting the use of other zoom lens units thereby providing a greater variety of zooming options. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to make the lens unit in Sato et al. removably mounted in order to increase the utility of the device by providing a greater variety of zooming options.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Luong Nguyen** whose telephone number is **(703) 308-9297**. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Wendy Garber**, can be reach on **(703) 305-4929**.

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:
(703) 872 - 9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

LN LN
9/29/2002


WENDY R. GARBER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600